Amendments to the Claims:

Please cancel claims 1 and 9-30, and add claims 33-42 as shown in the
following listing of claims. This listing of claims will replace all prior versions, and
5   listings, of claims in the application.

1   Claims 1-30 (canceled).

1   31.   (previously presented) An omni-directional image and 3-Dimensional data
2   acquisition apparatus, comprising:
3   a plurality of multi-camera modules, each multi-camera module
4   constructed in a manner comprising a plurality of cameras that are symmetrically
5   arranged with a specific point in a plane, each of the cameras taking charge of each of
6   divided angles such that each multi-camera module can take an omni-directional
7   continuous panoramic photograph of surrounding objects with the specific point;
8   first frame grabbers each of which is electrically connected to each of
9   the cameras of each multi-camera module, to grab photographed images by frames;
10   an exposure calculator electrically connected to the first frame
11   grabbers, to calculate exposure of each camera, based on the grabbed images by
12   frames;
13   an exposure signal generator electrically connected to each camera, to
14   transmit information about the exposure as a signal on the basis of the exposure
15   calculated by the exposure calculator;
16   storage means electrically connected to the each first frame grabber, to
17   store images photographed by the cameras according to photographing location and
18   photographing time;
19   a video camera electrically connected to the storage means via a
20   second frame grabber for grabbing photographed moving pictures by frames, to the
21   storage means a unique video clip corresponding to each image or image group to be
22   stored in the storage means;

23   a GPS sensor to sense the photographing location and photographing

24   time;

25   an annotation entering unit electrically connected to the GPS sensor to

26   calculate location and time corresponding to each frame based on sensed data of the

27   GPS sensor, the annotation entering unit being electrically connected to the storage

28   means to enter the calculated location and time in each frame as annotation; and

29   a trigger signal generator electrically connected the storage means, the

30   exposure signal generator, the annotation entering unit, the trigger signal generator

31   selectively transmits a trigger signal to the exposure signal generator or the annotation

32   entering unit in order that the cameras start to photograph the objects according to the

33   trigger signal; and wherein the multi-camera modules are vertically stacked and

34   formed in at least two layers in the direction of height.

1   32.   (previously presented) An omni-directional image and 3-Dimensional data

2   acquisition apparatus, comprising:

3   a plurality of multi-camera modules, each multi-camera module

4   constructed in a manner comprising a plurality of cameras that are symmetrically

5   arranged with a specific point in a plane, each of the cameras taking charge of each of

6   divided angles such that each multi-camera module can take an omni-directional

7   continuous panoramic photograph of surrounding objects with the specific point;

8   first frame grabbers each of which is electrically connected to each of

9   the cameras of each multi-camera module, to grab photographed images by frames;

10   an exposure calculator electrically connected to the first frame

11   grabbers, to calculate exposure of each camera, based on the grabbed images by

12   frames;

13   an exposure signal generator electrically connected to each camera, to

14   transmit information about the exposure as a signal on the basis of the exposure

15   calculated by the exposure calculator;

16   storage means electrically connected to the each first frame grabber, to

17   store images photographed by the cameras according to photographing location and

18   photographing time;

19   a distance sensor and a direction sensor for respectively sensing the

20   distance and direction of the image photographed by each camera;

21   a GPS sensor to sense the photographing location and photographing

22   time;

23   an annotation entering unit electrically connected to the GPS sensor to

24   calculate location and time corresponding to each frame based on sensed data of the

25   GPS sensor, the annotation entering unit being electrically connected to the storage

26   means to enter the calculated location and time in each frame as annotation; and

27   a trigger signal generator electrically connected the storage means, the

28   exposure signal generator, the annotation entering unit, the trigger signal generator

29   selectively transmits a trigger signal to the exposure signal generator or the annotation

30   entering unit in order that the cameras start to photograph the objects according to the

31   trigger signal; and wherein the multi-camera modules are vertically stacked and

32   formed in at least two layers in the direction of height.

1   33.   (new) The apparatus as claimed in claim 31, further comprising a plurality of

2   light intensity sensors electrically connected to the exposure calculator to allow the

3   exposure calculator to be able to calculate the exposure amount of each camera based

4   on external light intensity.

1   34.   (new) The apparatus as claimed in claim 31, wherein the storage means is one

2   of digital storage devices comprised of a hard disk, compact disk, magnetic tape and

3   memory.

1   35.   (new) The apparatus as claimed in claim 31, further comprising an audio

2   digital converter electrically connected to the storage means, the audio digital

3   converter converting an audio signal sensed by an audio sensor into a digital signal as

4   an audio clip to correspondingly attach to each image or image group to be stored in

5   the storage means.

1   36.   (new) The apparatus as claimed in claim 31, further comprising mobile

2   means, on which the multi-camera modules are mounted, to enable continuous

3   panoramic photographing while moving.

1   37.   (new) The apparatus as claimed in claim 31, further comprising a distance

2   sensor and a direction sensor for respectively sensing the distance and direction of the

3   image photographed by each camera.

1   38.   (new) The apparatus as claimed in claim 32, further comprising a plurality of

2   light intensity sensors electrically connected to the exposure calculator to allow the

3   exposure calculator to be able to calculate the exposure amount of each camera based

4   on external light intensity.

1   39.   (new) The apparatus as claimed in claim 32, wherein the storage means is one

2   of digital storage devices comprised of a hard disk, compact disk, magnetic tape and

3   memory.

1   40.   (new) The apparatus as claimed in claim 32, further comprising an audio

2   digital converter electrically connected to the storage means, the audio digital

3   converter converting an audio signal sensed by an audio sensor into a digital signal as

4   an audio clip to correspondingly attach to each image or image group to be stored in

5   the storage means.

1   41.   (new) The apparatus as claimed in claim 32, further comprising a video
2   camera electrically connected to the storage means via a second frame grabber for
3   grabbing photographed moving pictures by frames, to the storage means a unique
4   video clip corresponding to each image or image group to be stored in the storage
5   means.

1   42.   (new) The apparatus as claimed in claim 32, further comprising mobile
2   means, on which the multi-camera modules are mounted, to enable continuous
3   panoramic photographing while moving.